



September 05, 2019

Apex Companies, LLC

Melanie McAllister

4150 Darley Avenue, Suite 1

Boulder CO 80305

Project Name - JC Hunt Wolf Creek

Project Number - 4910

Attached are your analytical results for JC Hunt Wolf Creek received by Origins Laboratory, Inc. September 04, 2019. This project is associated with Origins project number Y909034-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Apex Companies, LLC

4150 Darley Avenue, Suite 1

Boulder CO 80305

Melanie McAllister

Project Number: 4910

Project: JC Hunt Wolf Creek

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01	Y909034-01	Water	August 28, 2019 11:20	09/04/2019 09:50

Origins Laboratory, Inc.



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Melanie McAllister
Project Number: 4910
Project: JC Hunt Wolf Creek

ORIGINS

LABORATORY, INC

www.originslaboratory.com

page 1 of

Client: Apex Companies

Project Manager: Melanie

Address: 4150 Darter Ave Ste 1
Boulder

Project Name: Wolf Creek

Project Number: 4910

Telephone Number: _____

Samples Collected By: JR

Email Address: melanie@alltelnet.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis			Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other	7 pH	37°C	
MW-01	8-28-19	1120	3	X				X				X	X	1
														2
														3
														4
														5
														6
														7
														8
														9
														10
Relinquished By: <u>[Signature]</u>	Date: <u>9-4-19</u>	Time: <u>9:50</u>		Received By: <u>[Signature]</u>				Date: <u>9-4-19</u>			Time: <u>9:50</u>			Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>
Relinquished By: <u>[Signature]</u>	Date: _____	Time: _____		Received By: _____				Date: _____			Time: _____			

Temp Received: 3.7

Date Results Needed

Origins Laboratory, Inc.

Jose Pellegrini

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Melanie McAllister
Project Number: 4910
Project: JC Hunt Wolf Creek

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 7909034 Client: Apex Co.
Client Project ID: Wolf Creek
Checklist Completed by: Dan Lee Shipped Via: Pick-up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 9-4-19 Airbill #: _____
Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: _____
(Describe)
Cooler Number/Temperature: 1003 3.2 °C _____ °C _____ °C _____ °C
Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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Apex Companies, LLC
4150 Darley Avenue, Suite 1
Boulder CO 80305

Melanie McAllister
Project Number: 4910
Project: JC Hunt Wolf Creek

MW-01

8/28/2019 11:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y909034-01 (Water)

BTEX/TVPH by EPA 8260D

Benzene	0.0766	0.00100	mg/L	1	B910409	KDK	09/04/2019	09/05/2019	
Toluene	0.00134	0.00100	"	"	"	KDK	"	"	
Ethylbenzene	0.00526	0.00100	"	"	"	KDK	"	"	
Xylenes, total	ND	0.00100	"	"	"	KDK	"	"	U
Gasoline Range Hydrocarbons	0.702	0.100	"	"	"	KDK	"	"	
Surrogate: 1,2-Dichloroethane-d4	75.2 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	83.2 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	83.8 %	70-130			"	"	"	"	

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Project Number: 4910
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Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9I0409 - EPA 5030B (Water)										
Blank (B9I0409-BLK1)					Prepared: 09/04/2019 Analyzed: 09/04/2019					
Benzene	ND	0.00100	mg/L							U
Toluene	ND	0.00100	"							U
Ethylbenzene	ND	0.00100	"							U
Xylenes, total	ND	0.00100	"							U
Gasoline Range Hydrocarbons	ND	0.100	"							U
Surrogate: 1,2-Dichloroethane-d4	0.046		"	0.0625		74.1	70-130			
Surrogate: Toluene-d8	0.059		"	0.0625		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.053		"	0.0625		84.8	70-130			

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Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9I0409 - EPA 5030B (Water)										
LCS (B9I0409-BS1)					Prepared: 09/04/2019 Analyzed: 09/04/2019					
Benzene	0.0521	0.00100	mg/L	0.0500		104	70-130			
Toluene	0.0569	0.00100	"	0.0500		114	70-130			
Ethylbenzene	0.0480	0.00100	"	0.0500		96.1	70-130			
m,p-Xylene	0.0951	0.00200	"	0.100		95.1	70-130			
o-Xylene	0.0472	0.00100	"	0.0500		94.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.045		"	0.0625		72.0	70-130			
Surrogate: Toluene-d8	0.061		"	0.0625		97.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.055		"	0.0625		87.8	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9I0409 - EPA 5030B (Water)										
Matrix Spike (B9I0409-MS1)		Source: Y909033-01			Prepared: 09/04/2019 Analyzed: 09/04/2019					
Benzene	0.0490	0.00100	mg/L	0.0500	ND	97.9	70-130			
Toluene	0.0525	0.00100	"	0.0500	ND	105	70-130			
Ethylbenzene	0.0466	0.00100	"	0.0500	ND	93.2	70-130			
m,p-Xylene	0.0901	0.00200	"	0.100	0.000150	89.9	70-130			
o-Xylene	0.0441	0.00100	"	0.0500	ND	88.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.044		"	0.0625		69.7	70-130			S-04
Surrogate: Toluene-d8	0.059		"	0.0625		94.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.054		"	0.0625		87.2	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9I0409 - EPA 5030B (Water)

Matrix Spike Dup (B9I0409-MSD1)		Source: Y909033-01			Prepared: 09/04/2019 Analyzed: 09/04/2019					
Benzene	0.0516	0.00100	mg/L	0.0500	ND	103	70-130	5.15	20	
Toluene	0.0555	0.00100	"	0.0500	ND	111	70-130	5.50	20	
Ethylbenzene	0.0479	0.00100	"	0.0500	ND	95.7	70-130	2.65	20	
m,p-Xylene	0.0916	0.00200	"	0.100	0.000150	91.5	70-130	1.68	20	
o-Xylene	0.0446	0.00100	"	0.0500	ND	89.3	70-130	1.13	20	
Surrogate: 1,2-Dichloroethane-d4	0.044		"	0.0625		71.2	70-130			
Surrogate: Toluene-d8	0.060		"	0.0625		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.055		"	0.0625		87.3	70-130			

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Notes and Definitions

U Sample is Non-Detect.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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